

Office of the President

TO MEMBERS OF THE FINANCE AND CAPITAL STRATEGIES COMMITTEE:

ACTION ITEM

For Meeting of May 15, 2019

APPROVAL OF DESIGN FOLLOWING ACTION PURSUANT TO CALIFORNIA ENVIRONMENTAL QUALITY ACT, FRANKLIN ANTONIO HALL, SAN DIEGO CAMPUS

EXECUTIVE SUMMARY

The proposed project will construct Franklin Antonio Hall, a building of approximately 127,600 assignable square feet (187,000 gross square feet) of collaborative research space in support of research centers associated with the Jacobs School of Engineering (JSOE). The project will provide shared laboratory centers for collaboration in key research programs with strategic industry partners. The research space will include faculty offices. The building will also include: space for the Institute for the Global Entrepreneur; education space (general assignment classrooms including a 250-seat auditorium and two 100-seat classrooms, student collaborative study space, and an executive outreach classroom); space for undergraduate student extracurricular projects; shared meeting space; and a café.

This project was presented to the Regents for discussion at their September 2017 meeting (*Engineering Interdisciplinary Building, San Diego Campus*). In recognition of alumnus Franklin Antonio's gift of \$30 million for programmatic expansion of JSOE, President Napolitano approved naming the building Franklin Antonio Hall in November 2017. In March 2018, the Regents approved preliminary plans funding for the project in the amount of \$8 million, funded from general campus funds. In January 2019, the Regents approved the project budget of \$185 million to be funded with external financing (\$180 million) and campus funds (\$5 million).

The Regents are being asked to: (1) adopt the California Environmental Quality Act Findings for Franklin Antonio Hall, having considered both the 2018 Long Range Development Plan (LRDP) Environmental Impact Report (EIR) for the La Jolla Campus and Addendum No. 1 to the 2018 LRDP EIR for Franklin Antonio Hall; and (2) approve the design of Franklin Antonio Hall.

RECOMMENDATION

The President of the University recommends that, following review and consideration of the environmental consequences of the Franklin Antonio Hall project, as required by the California Environmental Quality Act (CEQA), including any written information addressing this item

received by the Office of the Secretary and Chief of Staff to the Regents no less than 24 hours in advance of the beginning of this Regents meeting, testimony or written materials presented to the Regents during the scheduled public comment period, and the item presentation, the Finance and Capital Strategies Committee recommend that the Regents:

- A. Adopt the CEQA Findings for Franklin Antonio Hall, having considered the 2018 Long Range Development Plan (LRDP) Environmental Impact Report (EIR) for the La Jolla Campus, as well as Addendum No. 1 to the 2018 LRDP EIR for Franklin Antonio Hall.
- B. Make a condition of approval the implementation of applicable mitigation measures within the responsibility and jurisdiction of UC San Diego, as identified in the Mitigation Monitoring and Reporting Program adopted in connection with the 2018 LRDP EIR.
- C. Approve the design of Franklin Antonio Hall, San Diego campus.

BACKGROUND

The Jacobs School of Engineering (JSOE) ranks 11th among the nation's top engineering schools, and seventh in the nation among public universities according to the March 2019 *U.S. News and World Report* ranking of graduate schools. JSOE includes six engineering departments: Bioengineering, Computer Science and Engineering, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, Nanoengineering, and Structural Engineering.

All departments strive to provide their students with the best possible training in basic science and engineering. JSOE students have the reputation for their ability to work in interdisciplinary teams, their integrative thinking and training, and their general knowledge of information technology, independent of their field of engineering. These attributes provide JSOE students with the flexibility to adapt and be successful in the rapidly changing job market, driven by changes in communication and information technology.

JSOE is a premier research school set apart by an entrepreneurial culture and integrative engineering approach. JSOE educates tomorrow's technology leaders, conducts leading edge research, and drives innovation and the transfer of discoveries for the benefit of society. Adequate facilities are necessary to continue to support and enhance these achievements, as well as to ensure the retention and recruitment of excellent faculty and staff.

The majority of JSOE's space is in seven buildings, the newest being the Structural and Materials Engineering Building, which was completed in 2012. The proposed project is a key element in JSOE's response to the need to further grow and develop its programs.

PROJECT DESCRIPTION

Franklin Antonio Hall will provide approximately 127,600 assignable square feet (asf) (187,000 gross square feet (gsf)) of new space that will include approximately 13 research collaboration

laboratories and faculty offices. The building will also include: space for the Institute for the Global Entrepreneur; education space (general assignment classrooms including a 250-seat auditorium and two 100-seat classrooms, student collaborative study space, and an executive outreach classroom); collaborative work space for undergraduate student extracurricular projects; shared meeting space; and a café. The building will serve as a living laboratory for advanced research in critical areas related to the digital future and will be designed to foster interactions among and across the research teams, laboratories, and strategic industry partners. In addition, it will provide space needed for a projected increase in the number of faculty in JSOE and improve the faculty-student ratio in all engineering departments.

The building will have flexible space: laboratory configurations could be modified periodically as existing centers conclude their work and new centers are funded. The building will include core laboratories that are shared among faculty and used by industry collaborators.

The conference space will be for informal and formal meetings, including small group discussions and one- to two-day research reviews. The meeting rooms will be designed to accommodate up to 200 collaborators. Finally, the building will include space for teaching and online courses related to the Master's Program. This will allow the Master of Advanced Study Degree Executive Education Programs, which cater to working engineers, to continue to meet the needs of industry.

JSOE is currently engaged in a number of strategic themes with campus partners. Many of these initiatives, including those described below, will be housed in or supported by the new building, either within the "collaboratories" or in dedicated space (such as the Institute for the Global Entrepreneur).

Institute for the Global Entrepreneur, currently located in the Powell-Focht Bioengineering Building, trains influential engineering leaders, who drive innovation from concept to commercialization using principles of engineering, business, and practical entrepreneurial thinking, working towards a common goal. The institute educates students so they are able to bring research discoveries from the laboratory bench to the marketplace, utilizing workshops, personal mentoring, and connections to investors.

The proposed building will include a teaching facility, incubator space for emerging companies, as well as prototyping facilities where researchers can build and assemble their projects.

Agile Research Centers, currently dispersed in various locations at JSOE, apply emerging and converging technologies to address challenges facing society. Faculty and industry teams are focused on application-driven research. The desired outcome is systems-level research, solutions to industry challenges, students prepared in engineering fields in demand by industry, and the University better positioned to leverage industry funds for larger federal investment. The centers will be designed with flexibility to adapt as research challenges and opportunities evolve.

The building will include meeting space where up to 200 collaborators could hold multi-day scientific review meetings. Such space will allow for plenary sessions, small group discussions, poster sessions, and receptions.

Contextual Robotics Institute, currently located in Atkinson Hall, provides a platform for research collaboration at the intersection of machine learning, cognitive computing, computer vision and sensing, and controls and embedded systems. The institute promotes integrated systems research projects such as those focused on human assists for medicine, elder care, disaster response, environmental monitoring, and autonomous vehicles.

A core robotics laboratory for a showcase laboratory where researchers can focus on human-machine interaction will be included in the building.

Executive Education Programs, currently using space throughout JSOE, are Master's Degree programs that cater to working engineering professionals with a Friday/Saturday schedule on alternating weekends. This program allows for a smaller class size and completion after two years of study. Classes are taught by JSOE faculty, with an interdisciplinary focus, and students complete team-based industry design projects. This program provides an academic path that allows working engineering professionals to continue advancing their knowledge.

Space for this growing field of Executive Education programs and online courses will be included in the building.

The space program summary is provided in Table 1 below:

| Table 1 Franklin Antonio Hall Space Area Summary by Program | | | |
|--|--|-----------------|----------------|
| Program Category | Area | Quantity | ASF |
| Research | Collaboration Laboratory and Faculty Offices | 13 | 91,120 |
| | Scholarly Activity | 3 | 950 |
| | Subtotal - Research | -- | 92,070 |
| Institute for the Global Entrepreneur | Collaboration/Team Rooms, Incubator Space, Offices, Small Conference | -- | 4,800 |
| Undergraduate Student Extracurricular Projects | Open collaborative work space | 1 | 1,500 |
| Education | Auditorium (250 seats) | 1 | 5,900 |
| | Auditorium Storage, Support, Lobby, Vestibule, Audio Visual | -- | 2,700 |
| | General Assignment Classroom (100 seats each) | 2 | 5,050 |
| | Classroom Storage/Support | 2 | 560 |
| | Executive Outreach Classroom | 1 | 2,200 |
| | Student Collaborative Study Space | 1 | 5,200 |
| | Subtotal – Education | -- | 21,610 |
| Shared Conference Rooms | Large Conference/Audio Visual/Storage | 1 | 1,700 |
| | Medium Conference | 3 | 2,070 |
| | Small Conference and Storage | 4 | 1,650 |
| | Subtotal – Shared Conference Rooms | -- | 5,420 |
| Public Spaces | Café and Support | 1 | 2,200 |
| | TOTAL | -- | 127,600 |

DESIGN

Project Site

The building will be located in the Warren College neighborhood, on the site of an existing 355-space parking lot (P502), north of the JSOE Complex (refer to Attachment 1, Design Graphics). The project site is approximately 3.2 acres. The campus plans to mitigate the loss of parking by reallocating spaces within the existing parking supply and implementing operational changes.

Building Design

The Franklin Antonio Hall project would be a four-story plus basement cast-in-place concrete building with an atrium lobby entrance facing Voigt Drive to the south. Level 1 would contain the public spaces, including two 100-seat classrooms, a 250-seat auditorium, collaborative work space for undergraduate student extracurricular projects, the Institute for the Global Entrepreneur, shared meeting space, and a small café. Levels 2 and 3 are identical and would contain four shared research collaboration laboratories containing engineering research space and faculty offices, several conference rooms, collaborative student work stations, and a small kitchenette. Level 4 would contain three shared research collaboration laboratories containing engineering research space and faculty offices, conference rooms, collaborative student work stations, and a small kitchenette. Level 4 would also contain the Executive Outreach Center, including a classroom and conference facilities, a hoteling office, and a support office.

The Basement Level would contain two shared Research Collaboration Laboratories with a design that provides for rigorous stability requirements including vibration isolation. The Basement Level would also contain faculty offices, collaborative student workstations, and conference rooms. Building services (mechanical, plumbing, and electrical equipment rooms), including all incoming utilities, would also be located in the basement.

The loading dock and service area, located to the east of the building at the Basement Level, would be accessed from a new service drive from Equality Lane (included in the project). The service drive would also act as a fire lane for this project.

Access to natural daylight for most of the occupied spaces in the building was a primary design objective and contributes to the achievement of Leadership in Energy and Environmental Design (LEED™) and sustainability goals. The building design will provide abundant natural daylight throughout and allow the building to take advantage of views of the natural landscape to the west of the project site.

The exterior facade of the building would be comprised of high-energy performance glazing and aluminum curtain and window wall systems, and exposed cast-in-place concrete. Vertical louvers are proposed to provide shade (cooling) characteristics and visual screening abilities, further enhancing the building massing. The proposed roof parapet would be integral to the building and would serve as a screen for rooftop equipment and mechanical equipment penthouses.

The Franklin Antonio Hall Building is sited to take advantage of the surrounding grades to provide access to several outdoor plazas and terrace areas. The proposed café on the first level is sited to take advantage of the views of the natural landscape to the north and west of the project site.

Many of the outdoor and open spaces are proposed to include tables, chairs, and benches to encourage collaboration and gathering by researchers, students, and staff. Plant species selected

for the landscape plan would be drought-tolerant and compatible with surrounding native vegetation.

Long Range Development Plan

The project is consistent with the land use designation, goals, and objectives outlined in the 2018 Long Range Development Plan (LRDP) approved by the Regents in November 2018. The 2018 LRDP's land use designation for the site is Academic, which allows for academic facilities, classrooms, and research laboratories. The project supports 2018 LRDP goals and objectives by providing modern facility space to meet the programmatic growth demands of the campus (accommodating growth in faculty, and undergraduate and graduate students) and also allows for research partnerships that will benefit University programs – all objectives outlined in the 2018 LRDP.

Physical Design Framework

As described above, the project is consistent with the principles of the campus Physical Design Framework accepted by the Regents in March 2009.

Sustainable Practices

The Franklin Antonio Hall Building would comply with the University of California Sustainable Practices Policy. This project would outperform the required provisions of the California Energy Code's "Title 24" energy efficiency standards by at least 20 percent.

The policy also requires new construction projects to achieve a minimum standard equivalent to a LEED™ for New Construction (LEED™-NC) "Silver" Certification. UC San Diego would achieve a LEED™ Gold Certification (at minimum) and has targeted a LEED™ "Platinum" Certification. The project would also participate in the San Diego Gas and Electric *Savings by Design* program.

Sustainable features include:

- "Cool" or green roofs.
- Drought-tolerant species and other water efficiency measures in landscaping, including use of reclaimed water for irrigation.
- Captured condensate from roof-top air handling units would be directed into the existing campus reclaimed water loop for use in irrigation systems throughout the campus.
- Bioswales and detention basin to filter and dissipate water and slow runoff dispersal into the storm drain system and the adjacent canyon.
- Building heating hot water and domestic hot water would be achieved through extracting heat from the campus chilled water return loop, utilizing heat pumps.
- Effective use of glazing and windows to maximize delivery of natural light and views where feasible.
- Management of construction waste: 75 percent to be recycled or salvaged.
- Photovoltaic panels will be installed on the roof.

Seismic Safety Policy

This project will comply with the University of California Seismic Safety Policy, including independent structural engineering peer review.

Project Delivery

The campus has competitively bid an Integrated Construction Manager/General Contractor (iCM/GC) for the project. Phase 1 would be preconstruction services including scheduling assistance, bringing on board design/assist and design/build subcontractors, constructability reviews, detailed construction cost validation with the intent to significantly reduce the risk of project construction cost overruns. The iCM/GC delivery methodology affords opportunities, if necessary, to re-bid and fine tune sub-trade construction costs to fit the overall project construction cost budget.

Coastal Development Permit

The project site is within the California Coastal Zone and will require a Coastal Development Permit (CDP) following approval by the Regents. The CDP application has been submitted to the California Coastal Commission (Commission) and is currently in the review process. The campus anticipates the Commission's vote to take place at a meeting in July/August 2019.

Project Schedule

The project is currently in the preliminary plans phase. It is estimated that construction would commence in September 2019, with completion by November 2021.

CEQA COMPLIANCE

Pursuant to the California Environmental Quality Act (CEQA), Addendum No. 1 to the 2018 LRDP EIR (SCH# 2016111019) has been prepared for Franklin Antonio Hall (Attachment 4). None of the circumstances that would trigger subsequent or supplemental environmental review under Public Resources Code Section 21166 and CEQA Guidelines Sections 15162 or 15163 have occurred or are present for Franklin Antonio Hall.

CEQA Findings (Attachment 5) have been prepared to support the University's determination that the proposed project would not require major revisions of the 2018 LRDP EIR. The proposed project involves only minor technical changes to the 2018 LRDP EIR and reaffirms previously adopted CEQA Findings.

Key to Acronyms

| | |
|------------------------|--|
| ASF | Assignable-Square-Feet |
| CDP | Coastal Development Permit |
| Commission | California Coastal Commission |
| CEQA | California Environmental Quality Act |
| EIR | Environmental Impact Report |
| GSF | Gross Square Feet |
| iCM/GC | Integrated Construction General Manager/General Contractor |
| JSOE | Jacobs School of Engineering |
| LEED TM | Leadership in Energy and Environmental Design |
| LEED TM -NC | Leadership in Energy and Environmental Design for New Construction |
| LRDP | Long Range Development Plan |

ATTACHMENTS:

| | |
|--------------|--|
| Attachment 1 | Design Graphics |
| Attachment 2 | 2018 LRDP: https://drive.google.com/file/d/1GSHfysEpMi2CcAVIZKo9xfKcXRoS WLdJ/view |
| Attachment 3 | 2018 LRDP EIR: http://lr dp.ucsd.edu/campus/review/final.html |
| Attachment 4 | 2018 LRDP EIR Addendum No. 1 Franklin Antonio Hall: https://drive.google.com/open?id=1r3tM06c3kBEubAfgXJrExaQuBIhPrdp |
| Attachment 5 | CEQA Findings |